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EXAMINER
MYINT, DENNIS Y

ART UNIT	PAPER NUMBER
2162	

DATE MAILED: 08/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/658,182	BRINKMEYER, JAY C.	
	Examiner	Art Unit	
	Dennis Myint	2162	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09/09/2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *18 and 26-47* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *18 and 26-47* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *09 September 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *09/09/2003*.
4) ☒ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 18 and 26-47 have been examined.

2. This office action is in response to the applicant's amendment filed on 9 September 2003. Claims 1-17 and 19-25 have been cancelled and claims 26-47 were added. Accordingly, claims 18 and 26-47 are pending. Based on the amendment, this new office action is issued as follows.

Double Patenting

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claim 26, 27, 18, 37, and 38 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-4 of U.S. Patent No. 6308167. Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 1-4 of U.S. Patent No. 6308167

contain every element of instant claims 26, 27, 18, 37, and 38 as such anticipate instant claims 26, 27, 18, 37,and 38.

As per claim 26 and 27, claim 2 of U.S. Patent No. 6308167 contains every element of instant claims 26 and 27.

As per claim 18, the computer system of claim 2 of U.S. Patent No. 6308167 is capable of performing each and every step of the method of instant claim 18 and thus claim 18 is not patentably distinct from claim 2 of Patent No. 6308167.

As per claim 37 and 38, claim 1 of U.S. Patent No. 6308167 contains every element of instant claims 37 and 38.

Claim 26, 27, 18, 37, and 38 of the instant application therefore are not patentably distinct from the earlier patent claims and as such are unpatentable over obvious-type double patenting. A later patent/application is not patentably distinct from an earlier claim if the later claim is anticipate by the earlier claim.

"A later patent claim is not patentably distinct from an earlier patent claim if the later claim is obvious over, or ***anticipated*** by, the earlier claim. In re Longi, 759 F.2d at 896, 225 USPQ at 651 (affirming a holding of obviousness-type double patenting because the claims at issue were obvious over claims in four prior art patents); In re Berg, 140 F.3d at 1437, 46 USPQ2d at 1233 (Fed. Cir. 198) (affirming a holding of obviousness-type double patenting where a patent application claim to a genus is anticipated by a patent claim to a species within that genus). ELI LILLY AND COMPANY v. BARR LABORATORIES, INC., United States Court of Appeals for the

Federal Circuit, ON PETITION FOR REHEARING EN BANC (DECIDED: May 30, 2001).

"Claim 12 and Claim 13 are generic to the species of invention covered by claim 3 of the patent. Thus, the generic invention is "***anticipated***" by the species of the patented invention. Cf., Titanium Metals Corp. v. Banner, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985) (holding that an earlier species disclosure in the prior art defeats any generic claim) 4. This court's predecessor has held that, without a terminal disclaimer, the species claims preclude issuance of the generic application. I re Van Ornum, 686 F.2d 937, 944, 214 USPQ 761, 767 (CCPA 1982); Schneller, 397 F.2d at 354. Accordingly, absent a terminal disclaimer, claims 12 and 13 were properly rejected under the doctrine of obviousness-type double patenting." (In re Goodman (CA FC) 29 USPQ2d 2010 (12/3/1993)).

5. Claim 28, 30-32, 35, and 36 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 2 of U.S. Patent No. 6308167 in view of Cornaby (U.S. Patent Number 5410722).

Referring to claim 28, claim 2 of U.S. Patent No. 6308167 does not fully encompass/anticipate the said instant claim. However, Cornaby teaches a queue system for dynamically allocating and moving memory registers between a plurality of pseudo queues, wherein a plurality of queue function calls includes an insert call, a remove call, a search and remove call, a search and insert call, a search only call and a peek (Cornaby, Column 8 Line 5 through Column 10 Line 8 and Figure 3A-6).

At the time the invention was made, it would have been obvious to combine said feature of using queue function calls as taught by Cornaby with claim 2 of U.S. Patent No. 6308167 so that the combined system would constitute the system of instant claim 27, wherein the plurality of queue function calls includes an insert call, a remove call, a search and remove call, a search and insert call, a search only call and a peek. One would have been motivated to do so in order that "queues within the queue system are not limited to a fixed length" (Cornaby, Column 2 Line 11-13).

Referring to claim 30, claim 2 of U.S. Patent No. 6308167 in view of Cornaby discloses the invention as claimed. Cornaby teaches a queue system for dynamically allocating and moving memory registers between a plurality of pseudo queues, wherein a pointer to a next register, a pointer to a previous register, and a pointer to the data structure in the queue (Cornaby, Column 2 Line 14-48).

Referring to claim 31, claim 2 of U.S. Patent No. 6308167 in view of Cornaby discloses the invention as claimed. See Abstract of Cornaby's specification for this disclosure, i.e. "Control means is provided for dynamically assigning task registers to queues by controlling the addresses stored in the previous and next fields in each header and task registers such that each of said task registers is always assigned to a queue in the queue system". Claim 2 of U.S. Patent No. 6308167 in view of Cornaby is additionally directed to the system of instant claim 26, wherein each generic queue header includes a dynamic queue header.

Referring to claim 32, claim 2 of U.S. Patent No. 6308167 in view of Cornaby discloses the invention as claimed. See Figure 2 of Cornaby's specification for this

disclosure, which shows a plurality of statue queue headers. Claim 2 of U.S. Patent No. 6308167 in view of Cornaby is additionally directed to the system of instant claim 26, wherein each generic queue header includes a static queue header.

Referring to claim 35 and 36, claim 2 of U.S. Patent No. 6308167 in view of Cornaby discloses the invention as claimed. Official Notice is taken that the use of queuing system in operating systems and system drivers is notoriously well known in the art. The queuing system of instant claim 26 operates on a computer, wherein the queuing system comprises a portion of an operating system as well as a portion of a driver.

6. Claim 39, 41, 42, and 43 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 6308167 in view of Cornaby (U.S. Patent Number 5410722).

Referring to claim 39, claim 1 of U.S. Patent No. 6308167 as applied to claim 37 and 38 does not fully encompass/anticipate the said instant claim. However, Cornaby teaches a queue system for dynamically allocating and moving memory registers between a plurality of pseudo queues, wherein a plurality of queue function calls includes an insert call, a remove call, a search and remove call, a search and insert call, a search only call and a peek (Cornaby, Column 8 Line 5 through Column 10 Line 8 and Figure 3A-6).

At the time the invention was made, it would have been obvious to combine said feature of using queue function calls as taught by Cornaby with claim 1 of U.S. Patent

No. 6308167 so that the combined system would constitute the system of instant claim 38, comprising the act of defining the plurality of queue function calls to include an insert call, a remove call, a search and remove call, a search and insert call, a search only call and a peek. One would have been motivated to do so in order that "queues within the queue system are not limited to a fixed length" (Cornaby, Column 2 Line 11-13).

Referring to claim 41, claim 1 of U.S. Patent No. 6308167 in view of Cornaby discloses the invention as claimed. Cornaby teaches a queue system for dynamically allocating and moving memory registers between a plurality of pseudo queues, wherein a pointer to a next register, a pointer to a previous register, and a pointer to the data structure in the queue (Cornaby, Column 2 Line 14-48).

Referring to claim 42, claim 1 of U.S. Patent No. 6308167 in view of Cornaby discloses the invention as claimed. See Abstract of Cornaby's specification for this disclosure, i.e. "Control means is provided for dynamically assigning task registers to queues by controlling the addresses stored in the previous and next fields in each header and task registers such that each of said task registers is always assigned to a queue in the queue system". Claim 2 of U.S. Patent No. 6308167 in view of Cornaby is additionally directed to the system of instant claim 37, wherein each generic queue header includes a dynamic queue header.

Referring to claim 43, claim 1 of U.S. Patent No. 6308167 in view of Cornaby discloses the invention as claimed. See Figure 2 of Cornaby's specification for this disclosure, which shows a plurality of statue queue headers. Claim 1 of U.S. Patent No.

6308167 in view of Cornaby is additionally directed to the system of instant claim 37, wherein each generic queue header includes a static queue header.

7. Claim 29 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 2 of U.S. Patent No. 6308167 in view of Cornaby and further in view of Douceur et al. (U.S Patent Number 6041053).

Referring to claim 29, claim 2 of U.S. Patent No. 6308167 in view of Cornaby does not fully encompass/anticipate the said instant claim. However, Douceur et al. is directed to a system and method classifying packets wherein each data structure includes a search key field, and one of the generic queue function calls utilizes a search command to scan each data structure attached to one of the generic queue headers until the search command matches the search key field and the operation of the one of the queue function calls is performed (Abstract of Douceur et al.)

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to add the feature of using a search key field as taught by Douceur et al. to the system and method of the claim 2 of U.S. Patent No. 6308167 in view of Cornaby so that, in the resultant system and method, each data structure would include a search key field, and one of the generic queue function calls utilizes a search command to scan each data structure attached to one of the generic queue headers until the search command matches the search key field and the operation of the one of the queue function calls is performed. One would have been motivated to do so in order

to provide "a search technique capable of rapidly retrieving stored information from a data structure" (Douceur et al., Column 3 Line 54-58).

8. Claim 40 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 6308167 in view of Cornaby and further in view of Douceur et al. (U.S Patent Number 6041053).

Referring to claim 40, claim 1 of U.S. Patent No. 6308167 in view of Cornaby does not fully encompass/anticipate the said instant claim. However, Douceur et al. is directed to a system and method classifying packets wherein each data structure includes a search key field, and one of the generic queue function calls utilizes a search command to scan each data structure attached to one of the generic queue headers until the search command matches the search key field and the operation of the one of the queue function calls is performed (Abstract of Douceur et al.)

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to add the feature of using a search key field as taught by Douceur et al. to the system and method of the claim 1 of 1 of U.S. Patent No. 6308167 in view of Cornaby so that, in the resultant system and method, each data structure would include a search key field, and one of the generic queue function calls utilizes a search command to scan each data structure attached to one of the generic queue headers until the search command matches the search key field and the operation of the one of the queue function calls is performed. One would have been motivated to do

so in order to provide "a search technique capable of rapidly retrieving stored information from a data structure" (Douceur et al., Column 3 Line 54-58).

9. Claim 33 and 34 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 2 of U.S. Patent No. 6308167 in view of Cornaby and further in view of Johnson et al. (U.S. Patent Number 5133053).

Referring to claim 33, claim 2 of U.S. Patent No. 6308167 in view of Cornaby does not fully encompass/anticipate the said instant claim. However, Johnson et al. teaches a system and method for interprocess communication queue location transparency, wherein bi-directional queues are employed to be more efficient for request and reply (Johnson et al., Column 10 Line 61-64). Note that bi-directional queues implemented in said manner could also function as unidirectional queues. Unidirectional feature is already inherent in a bidirectional queuing system.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine the feature of unidirectional/bidirectional queues as taught by Johnson et al. with the system and method taught by claim 2 of U.S. Patent No. 6308167 in view of Cornaby so that, in the combined system and method, each of the plurality of links is uni-directional. One would have been motivated to do so in order to "be more efficient for request and reply" (Johnson et al, Column 10 Line 61-64).

Claim 34 is rejected on the same basis as claim 33.

10. Claims 44-47 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 6308167 in view of Johnson et al. (U.S. Patent Number 5133053).

Referring to claim 44, claim 1 of U.S. Patent No. 6308167 as applied to claim 37 does not fully encompass/anticipate the said instant claim. However, Johnson et al. teaches a system and method for interprocess communication queue location transparency, wherein bi-directional queues are employed to be more efficient for request and reply (Johnson et al., Column 10 Line 61-64). Note that bi-directional queues implemented in said manner could also function as unidirectional queues. Unidirectional feature is already inherent in a bidirectional queuing system.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine the feature of unidirectional/bidirectional queues as taught by Johnson et al. with the method taught by claim 1 of U.S. Patent No. 6308167 so that, in the combined method, each of the plurality of links is uni-directional. One would have been motivated to do so in order to "be more efficient for request and reply" (Johnson et al, Column 10 Line 61-64).

Claim 45 is rejected on the same basis as claim 44.

Claim 46 and 47 are rejected on the same basis as claim 35 and 36.

Claim Rejections - 35 USC § 101

11. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

12. Claims 18, 26, 27- 47 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

MPEP 2106 IV.B.2.(b) states that "a claim that requires one or more acts to be performed defines a process. However, not all processes are statutory under 35 U.S.C. 101. Schrader, 22 F.3d at 296, 30 USPQ2d at 1460. To be statutory, a claimed computer-related process must either: (A) result in a physical transformation outside the computer for which a practical application in the technological arts is either disclosed in the specification or would have been known to a skilled artisan, or (B) be limited to a practical application within the technological arts".

MPEP 2106.II.A states that "a process that consists solely of the manipulation of an abstract idea is not concrete or tangible. See In re Warmerdam, 33 F.3d 1354, 1360, 31 USPQ2d 1754, 1759 (Fed. Cir. 1994)".

Claims 18, 26, 27-47 in view of the above-cited MPEP sections are not statutory because they merely recite a number of computing steps without producing any tangible results and/or being limited to practical application within the technological arts. The claims do not indicate use of hardware on which the software runs to perform the steps recited in the body of the claim. Software or program can be stored on a medium and/or executed by a computer. In other words the software must be *computer-readable.* **The use of a computer is not evident in the claim.** MPEP 2106.IV.B.1 (a) refers to "computer-readable" medium with computer program encoded on it."

Claim Rejections - 35 USC § 102

13. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

14. Claim 18, 26-28, 30-32, 35-39, 41-43, 46, and 47 are rejected under 35 U.S.C. 102(b) as being anticipated by Cornaby (U.S. Patent Number 5410722).

As per claim 18, Cornaby teaches the limitation:

"A method for managing a queue having a plurality of queue headers within a computer system comprising the steps of:" (Figure 2-3L)

"attaching a plurality of data structures to the plurality of queue headers, where each data structure is attached to one of the plurality of queue headers" (Figure 2-3L *which shows a plurality of queue headers wherein each queue header includes a data structure*); and

"controlling operations of the plurality of queue headers utilizing one of a plurality of queue function calls" (Figure 2-3L).

As per claim 26, Cornaby discloses the limitations:

"A computer system that employs a queuing system, the queuing system" (Figure 2-3L) comprising:

"a plurality of generic queue headers, the plurality of generic queue headers being connected by a plurality of links" (Figure 2, *which shows a plurality of queues,* Abstract, and Column 1 Lines 54-64); and

"a data structure attached to at least one of the plurality of generic queue headers without reference to the plurality of links" (Figure 3A-3L).

As per claim 27, Cornaby is directed to the limitation:

"comprising a plurality of queue function calls for controlling operations of the plurality of generic queue headers" (Cornaby Abstract, i.e. "task registers").

As per claim 28, Cornaby is directed to the limitation:

"wherein the plurality of function calls includes an insert call, a search and remove call, a search and insert call, a search only call and a peek call" (Column 8 Line 5 through Column 10 Line 8 and Figure 3A-6).

As per claim 30, Cornaby is directed to the limitation:

"wherein each generic queue header includes a pointer to a next generic queue header, a pointer to a previous generic queue header, and a pointer to the attached data structure" (Column 2 Lines 14-18).

As per claim 31 Cornaby is directed to the limitation:

"wherein each generic queue header includes a dynamic queue header" (Cornaby, Abstract, i.e. *Control means is provided for dynamically assigning task registers to queues by controlling the addresses stored in the previous and next fields in each header and task registers such that each of said task registers is always assigned to a queue in the queue system*).

As per claim 32, Cornaby is directed to the limitation:

"wherein each generic queue header comprises a static queue header" (Figure 2, *which shows a plurality of statue queue headers*).

Claim 37 is rejected on the same basis as claim 26.

Claim 38 and 39 are rejected on the same basis as claim 27 and 28 respectively.

Claim 41, 42, and 43 are rejected on the same basis as claim 30, 31, and 32 respectively.

Claim Rejections - 35 USC § 103

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

16. Claim 29 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cornaby in view of Douceur et al. (hereinafter "Douceur") (U.S Patent Number 6041053).

Referring to claim 29, Cornaby as applied to claim 27 above does not explicitly disclose the limitation: "a search key and a search command."

Douceur teaches the limitation: "a search key and a search command" (Douceur Abstract). Douceur is directed to a system and method classifying packets wherein each data structure includes a search key field, and one of the generic queue function calls utilizes a search command to scan each data structure attached to one of the generic queue headers until the search command matches the search key field and the operation of the one of the queue function calls is performed (Abstract of Douceur)

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to add the feature of using a search key field as taught by Douceur et al. to the system of Cornaby as applied to claim 27 above so that, in the resultant system, each data structure would include a search key field, and one of the

generic queue function calls utilizes a search command to scan each data structure attached to one of the generic queue headers until the search command matches the search key field and the operation of the one of the queue function calls is performed. One would have been motivated to do so in order to provide "a search technique capable of rapidly retrieving stored information from a data structure" (Douceur et al., Column 3 Line 54-58).

Claim 40 is rejected on the same basis as claim 29.

17. Claim 35 and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cornaby in view of Peterson et al. (hereinafter "Peterson") (U.S Patent Application Publication Number 2006/0010420).

Referring to claim 35 Cornaby does not explicitly teach the limitation:

"wherein the queuing system comprises a portion of an operation system".

Peterson teaches the limitation:

"wherein the queuing system comprises a portion of an operation system" (Paragraph 0092, i.e., *poll the operating system even queue*).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to add the feature of using queues as part of an operating system, as taught by Peterson, to the method of Cornaby so that, in the resultant method would, the queuing system would comprise a portion of an operating system.

One would have been motivated to do so because it is notoriously well known in the art that queuing systems are part of modern operating system.

Claim 46 is rejected on the same basis as claim 35.

18. Claim 36 and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cornaby in view of Fischer et al. (hereinafter "Fischer") (U.S Patent Application Publication Number 2002/0163932).

Referring to claim 36 Cornaby does not explicitly teach the limitation: "wherein the queuing system comprises a portion of a driver".

Fischer teaches the limitation: "wherein the queuing system comprises a portion of a driver" (Paragraph 0500, i.e., *queues that lie within the device driver*).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to add the feature of using a queuing system as portion of driver as taught by Fischer to the method Cornaby so that, in the resultant method, the queuing system would comprise a portion of a driver. One would have been motivated to do so because it is well known in the art that device drivers comprise internal queuing systems.

Claim 47 is rejected on the same basis as claim 36.

19. Claim 33, 34, 44, and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cornaby in view of Johnson et al. (hereinafter "Johnson") (U.S. Patent Number 5133053).

Referring to claim 33 Cornaby does not explicitly teach the limitation: "each of the plurality of links is uni-directional."

Johnson teaches the limitation: "each of the plurality of links is uni-directional" (Column 10 Lines 61-64). Johnson teaches a system and method for interprocess communication queue location transparency, wherein bi-directional queues are employed to be more efficient for request and reply (Column 10 Line 61-64). Note that bi-directional queues implemented in said manner could also function as unidirectional queues. Unidirectional feature is already inherent in a bidirectional queuing system.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine the feature of unidirectional/bidirectional queues as taught by Johnson et al. with the system taught Cornaby so that, in the combined system, each of the plurality of links is uni-directional. One would have been motivated to do so in order to "be more efficient for request and reply" (Johnson et al, Column 10 Line 61-64).

Claim 34 is rejected on the same basis as claim 33.

Claim 44 and 45 are rejected on the same basis as claim 33 and 34 respectively.

Conclusion

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis Myint whose telephone number is (571) 272-5629. The examiner can normally be reached on 8:30AM-5:30PM Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Breene can be reached on (571) 272-4107. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Dennis Myint

AU-2162

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